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that it had a wider distribution. The pleasant record is mine of knowing of five stations for it, and thus confirming his belief. I detected it growing among *Pallavicinia Lyellii* (Hook.) S. F. Gray, collected at Arlington, Staten Island, Nov. 28th, 1903, a Field Day of the Torrey Botanical Club, by Mr. W. T. Horne and brought to the New York Botanical Garden. At Highlands, Monmouth Co., New Jersey, I have collected it two consecutive summers. The plants collected in September showed perianths with immature capsules and many antheridia. It was growing among Sphagnum plants; *Cephalozia connivens* (Dicks.) Lindb. in fruit, in the vicinity. These plants were all growing lustily and showed the same shade of tender green and I noticed the Telaranea only from its conferva-like meshes in contrast with the more sharply defined Sphagna. While in North Carolina, February last, I found it at Pinehurst, Southern Pines and at Jackson Springs, all in Moore Co., growing along the borders of running streams, with mosses. These plants showed the ashy-green color of the descriptions. Their delicacy seemed almost ethereal among the larger forms of vegetation and it was wonderful to me that they could survive the winter (for I found old perianths) and start growing as soon as the snow melted away. *Blepharostoma trichophyllum* (L.) Dumort. is the only hepatic likely to be confused with it. But *Telaranea nematodes longifolia* has underleaves two or three cells in length, incurved at apices, while the former's approximate the leaves in length. The leaves and underleaves are hair-like, the leaves being five-eight cells long, of a single series of cells to the basal cell. It is autoicous. The archegonia are on short postical branches, the one nearest the apex maturing first. This note is written with the intention of bringing this charming plant to the notice of hepatic students so that they may be on the lookout for it. I shall be grateful if any one finding it, will inform me.

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#### LICHENOLOGY FOR BEGINNERS—IV.

FREDERICK LEROY SARGENT.

(Begun in May, 1905, issue.)

In the above consideration of the morphology of lichens our attention has been directed particularly to such modifications of form as afford characters useful in systematic classification. But lichens are not only so many species to be named and classified; they are living things adapted to the humble conditions under which they live; and no more interesting field is open to the student of lichens than that which concerns their biology. While a great deal has already been done in the study of the gonidia and their function, and upon the structure and development of other organs, comparatively little has been attempted in the direction of learning the effect of the environment in influencing the form of the different parts or of studying the way these little plants meet the exigencies of their life. Such questions, for example, as the following would, we think, repay careful investigation.

What peculiarity have the dry pasture species in common, and what those of moist woods? Have these peculiarities any such relation to the supply of moisture and light as we find to be the case among higher plants which grow under conditions correspondingly different? What enemies have lichens and how do they protect themselves against their attacks? Are there any special arrangements which facilitate the scattering of spores? How is moisture absorbed by the thallus? Is the moisture which is taken in at one part of the thallus conducted to other parts (or must each part absorb directly through its own surface)? How fast do the different organs of lichens grow? To what extent is the rate of growth affected by differences of moisture, light and temperature? To what age do different sorts of lichens attain? Other questions of a similar nature will readily suggest themselves to anyone interested in these plants, and whereas many problems connected with the minute structure of lichens require considerable technical skill and the use of instruments of great delicacy, all that is needed for the profitable study of questions of the sort above indicated, is intelligent observation and note-taking in the field, or the performance of simple experiments.

A knowledge of the systematic relationship and the names of the species of one's own locality at least is obviously a desirable preliminary to such work. The only manual of North American species is Prof. Tuckerman's Synopsis. (A Synopsis of the North American Lichens: By Edward Tuckerman, Part I, 1882. Published by S. E. Cassino, Boston, Mass. Part II, 1888. Sold by Edwin Nelson, Amherst, Mass. Both parts now out of print). As this work was written for advanced lichenologists, beginners find it difficult to use. The sources of these difficulties are mainly these: first, insufficient acquaintance with the characters of the specimen studied, due to ignorance of just what to look for; second, not understanding the exact meaning of the phrases encountered in the book, or making the necessary allowances; third, the variability and close resemblance of the species themselves. Let us consider how these difficulties may be overcome.

The chief source of trouble is much increased by the too common habit among students of trying to read the descriptions and observe the characters of the species at the same time. Before referring to the book at all, one should make out as far as possible the characters of the specimen in hand. The following schedule of questions will, it is hoped, prove helpful by indicating the important features to be observed in such preliminary examination.

#### SCHEDULE FOR ANALYSIS.

What is the locality and habitat?

Is the thallus crustaceous, foliaceous (and appressed, frondose or umbilicate), fruticulose or cladoniæform, or of a form intermediate?

If *crustaceous*, is there a hypothalline fringe, and if so what color is it? Is the surface smooth, pulverulent, tartareous, verrucose, rimose, areolate, or otherwise peculiar? Of what color is it in the younger and in the older portions?

If *foliaceous* or *fruticulose*, is the thallus gelatinous, membranaceous, cartilaginous or coriaceous? Of what form is the margin of the thallus or its lobes or branches? Is the thallus alike on all sides or is there an upper and an under surface? Is the upper or general surface corticate or ecorticate (i. e. with or without a cortex), smooth, polished, wrinkled, channelled, reticulate, lacunose, pulverulent, granular, tomentose, sorediiferous, isidiiferous or otherwise peculiar? What is its color? If sorediiferous or isidiiferous is the whole surface covered or only certain portions of it, and what form do the soredia or isidia assume? If there is a lower surface differing from the upper is it corticate or ecorticate, smooth, wrinkled, pitted, veined, fibrillose (i. e. with rhizoids) or otherwise peculiar? If fibrillose, what is the color of the rhizoids, and are they simple or branched, few or numerous, long or short? Do they extend beyond the margin of the thallus as cilia?

If *cladoniaform*, is the horizontal thallus crustaceous, squamulose (i. e. composed of scale-like lobes or segments), or foliaceous? If crustaceous of what form and color is it, and what is the character of the margin and surface? (See questions given above for crustaceous thallus.) If squamulose or foliaceous, what is the form of the squamules or lobes, what is the form of the margin, and what the color and character of the surface above and below? (See the questions given above for foliaceous thallus.) Of what form are the podetia? Are they solid or hollow, and if branched what is the form and arrangement of the branches? What is the texture and color and what the character of the surface?

[How are the gonidia arranged in the thallus? Of what form and color are they?\*

Are the apothecia scutellæform, lecideine, biatorine, cephaloid, lirellæform, crateriform or angiocarpous? Are they immersed, innate, adnate, sessile or stalked? Upon what part of the thallus are they borne?

If gymnocarpous, is the exciple entire at the margin, crenate, ciliate with fibrills or projections or otherwise peculiar? What is the color of the disk when young and when mature, and of what color is the exciple? [Is the hypothecium pale or blackened?]

If angiocarpous, are the apothecia separate and scattered or crowded together and immersed in a common receptacle or stroma? [Of what form is the perithecium, and is it pale or blackened? Is the amphithecium pale or blackened?]

[Are the paraphyses simple or branched? Are the thekes cylindrical, club-shaped (clavate), pear-shaped (pyriform), ovoid, globose, or otherwise peculiar in form? How many spores are there in a theke? Are the spores colorless (pale) or colored? Are they globose, elliptical, ovoid, oblong, cylindrical, fusiform, dactyloid, cymbiform, acicular or of some intermediate form? Are they simple, bi- quadri- or plurilocular, polar-bilocular or muriform? What are the extremes of length and breadth in micromillimeters?]

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\*The questions enclosed in brackets call for the use of the compound microscope, and although here placed in logical sequence among the others, had better be taken up by the student all together at the end.

[What is the form of the spermagones? Where are they situated on the thallus What is the form and size of the spermatia?]

After the student has examined a certain number of species according to the above schedule he will have learned what to look for so well as to have no further need of such help, and will be able to make his preliminary examinations with thoroughness and rapidity. He will learn also that in dealing with certain genera, some features call for more particular observation and some for less. While it is desirable to know the microscopic structure, particularly as regards the gonidia and the spores, it is not always necessary for the recognition of species and even to a less extent of genera. Hence a good beginning may be made with only a hand magnifier, which was indeed all the earlier lichenologists had to aid them.

As regards the second difficulty referred to above, namely, that of not understanding fully the statements of the book or failing to make the necessary allowances, the student will find that these perplexities will disappear in proportion as the mind comes to associate the different phrases with particular features seen in the specimens examined. As in the systematic study of other difficult groups, so with lichens, it is found to be very helpful at first if one can take specimens of which one knows the name, and compare them point for point with the description as given in the manual, for the family, genus and species to which they belong. To enable beginners to do something of this work, there is appended to the present paper a short analytical key by means of which the names of a few of our commonest and most easily recognized species may be determined with tolerable accuracy.

In regard to the third mentioned source of difficulty (the variability and close resemblance of many species) it must be said that even the most advanced students have this to contend with, and as in the case of other perplexing groups, the last resort is the comparison of doubtful forms with authentically named specimens.

Besides Prof. Tuckerman's Synopsis the following writings in English may be profitably consulted by the student:

An Introduction to the Study of Lichens. Henry Willey. New Bedford, 1887.

A Popular History of British Lichens. W. Lander Lindsey. London, 1856.

Guide to the Recognition of the Principal Orders of Cryptograms and the Commoner and More Easily Distinguished New England Genera. Frederick Le Roy Sargent. Cambridge. 1886.

The article "Lichens" in *Encyclopaedia Britannica*, Ninth Edition, and the Section on Lichens (pp. 114-126) in Gœbel's *Outlines of Classification* (Oxford, 1887), give a good general idea of the structure, etc., of these plants.

A Text-Book of General Lichenology, with Descriptions and Figures of the Genera occurring in the United States. Albert Schneider, Binghamton, N. Y., 1897.

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Such technical terms as occur in the following Key and have not been defined in the foregoing pages, are used in the same sense as when employed in the description of phanogams. The abbreviations are the same as those given in Figs. 2-8.

# ARTIFICIAL KEY TO SPECIES.\*

\*The method of using this form of Key may be illustrated by taking as an example a specimen of our typical lichen, with the characters of which we are already familiar. Out of the four alternatives given under "1," we find that only that marked "c," describes our specimen. This refers us to Section 12. Here we find that "c" is the alternative that fits, and this refers us to "15." Under 15 we must choose "a" and thence we go to 16, and from "16a" to "17a" which gives us the name, *Parmelia conspersa*.

1. a. Th. cladoniæform, podetia hollow..... 2
- b. Th. fruticulose or when young cladoniæform, and the podetia becoming fruticulose by the disappearance of the horizontal th. at least from the base..... 5
- c. Th. foliaceous or foliaceous-squamulose... 12
- d. Th. crustaceous ..... 21
2. a. Ap. brown..... 3
- Ap. scarlet or orange ..... 4
3. a. Podetia 3-6 cm. tall, dilated above into shallow cups, bearing apothecia on the rim, and from the centre giving rise to similar stalked cups; very smooth throughout. On the earth.

*Cladonia gracilis* var. *verticillata*.

- b. Podetia 5-25 mm. tall, top-shaped, short stalked, the margin spreading, bearing sessile or stalked ap.; granulose, warty or scurfy. On the earth, etc. .... *Cladonia pyxidata*.
- c. Podetia 1-3 cm. tall, goblet-shaped, rather long-stalked and slender, the margin erect, often with tooth-like projections sometimes bearing ap.; cortex disintegrating into a fine glaucous-white powder. On the earth, etc ..... *Cladonia fimbriata*.
4. a. Podetia cylindrical, sometimes branched, mostly about 2-4 mm. tall; smooth or with the surface wrinkled. On dead wood, etc.

*Cladonia cristatella*.

- b. Podetia elongated-top-shaped, about 15-35 mm. tall; smooth, becoming warty. On the earth.... *Cladonia Cornucopioides*.
5. a. Branches cylindrical and hollow..... 6
- b. Branches not hollow..... 7
6. a. Podetia about 3-6 cm. tall, branches about .5-1 mm. thick, several times forked, awl-shaped at the top, with a smooth firm cortex, brown above, becoming gray in the lower (older) portions. On the earth..... *Cladonia furcata* var. *subulata*.
- b. Podetia about 4-10 cm. tall, branches about .5-1.5 mm. thick, the divisions mostly wide-spreading, the sterile tips curved and drooping; ecorticate, the surface fibrous, sometimes appearing mealy or warty; ashy white or tinged with greenish straw-color. On the earth, often forming extensive mats. (Called "Reindeer Moss" from its forming the winter food of that animal.) ..... *Cladonia rangiferina*.
7. a. Th. softish, cottony within..... 8
- b. Th. cartilaginous.. ..... 9
8. a. Branches angular-terete or flattened, often sorediiferous, greenish or straw-colored, sometimes paler below. Mostly on dead wood and (with us) sterile..... *Everina brunastri*.

- b. Branches flattened, often isidiiferous, ashy-gray above, paler or often black spotted below. On trees and dead wood (mostly sterile).  
*Everina furfuracea.*
9. a. Branches flattened..... 10  
b. Branches terete ..... 11
10. a. Branches involute, beset at the margin with a row of dark-colored, finger-shaped projections, 0.3–0.5 mm. long (containing the spermagones). Th. mostly brown above, lighter towards the base where there is sometimes a red stain. Ap. (infrequent) scutellæform, dk. chestnut. On the earth. (The “Iceland Moss” of druggists.)  
*Cetraria Islandica.*
- b. Branches scarcely involute, often with slender projections at the margin, but these are sharp-pointed, yellowish or gray like the th., usually exceed 1. mm. in length and do not contain spermagones. Ap. scutellæform; dk. brown orange; th. ex. often radiately fibrillose. On trees and rocks.... *Theloschistes chrysophthalmus.*
- c. Branches not involute, without spermagone-bearing projections differing in color from the th. which is pale greenish or straw-color, rather rigid, more or less reticulately-lacunose and quite variable in the form and number of its divisions, Ap. scutellæform; dk. pale, not differing much from the th. in color. Mostly on trees.  
*Ramalina calicaris.*
11. a. Th. greenish, covered with numerous fibrils of the same color; medulla consisting of a cottony layer surrounding a tough central cord. Ap. scutellæform; dk. pale; th. ex. radiately fibrillose. On trees (called “Bearded Moss”)..... *Usnea barbata.*
- b. Th. dark brown, smooth, sometimes with pale soredia; medulla uniform throughout. Ap. (rare) scutellæform, small. Mostly on trees and dead wood... *Alectoria jubata.*
- c. Th. ashy-gray, the branches clothed with granules which may become coralloid or scale-like; medulla firm and uniform throughout. Ap. cephaloid, dark brown or black. On rocks or on the earth.  
*Stereocaulon.\**
12. a. Th. umbilicate..... 13  
b. Th. frondose ... 14  
c. Th. appressed, the margin sometimes ascendant ..... 15
13. a. Th. cartilaginous, pale brown or ashy above, fawn-color to dark-brown below, smooth on both surfaces, lobes sometimes much crowded and overlapping. Ap. angiocarpous, imbedded in the th. On rocks, near water so as to be occasionally submerged.  
*Endocarpum mineatum.*
- b. Th. cartilaginous, ashy-color above, whitish toward the center; below pale brownish or ash-colored; smooth on both surfaces, often pruinose; with numerous pustular protrusions above, having correspond-

\*Of genera thus marked we have several species, the discrimination of which is too difficult to be considered here.

ing indentations below. Ap. sub-scutellæform (appearing as if lecidienne), often clustered. On rocks in dry situations.

*Umbilicaria pustulata.*

- c. Th. coriaceous, often very large, brown above, smooth and even; below intensely black with crowded short fibrils. Ap. (infrequent) much as in the last but with dk. ridged concentrically. On rocks in rather dry situations..... *Umbilicaria Dillenii.*
- 14. a. Th. cartilaginous, lobes rounded, numerous and crowded, lacunose, pale grayish-green above, whitish or here and there blackening below; no fibrils at the margin. Ap. sub-pedicellate attached obliquely to the margins and summits of the lobes; th. ex. thin, entire or crenate. Sp. simple, ellipsoid. On trees and dead wood.  
*Cetraria lacunosa.*
- b. Much as in the last but with marginal fibrils and crenulate exciple. On trees and dead wood.... *Cetraria ciliaris.*
- c. Th. coriaceous, with rounded sinuses, strongly lacunose-reticulate, tawny or olivaceous; paler below, filbrillose in veins around naked spots. Ap. (infrequent) sessile at the margin of the lobes; th. ex. entire. Sp. cymbiform, 2-4-locular. On trees and rocks. (Formerly esteemed as a pulmonary medicine from its resemblance to a lung)..... *Sticta pulmonaria.*
- d. Th. coriaceous, with rounded (sterile) lobes and narrower erect ones bearing at the end shield-shaped (often revolute) apothecia; thallus mostly veiny below and with long rhizoids. Ap. innate on the upper surface of the lobes; th. ex. torn-crenate when young. Sp. fusiform-acicular, 4-locular. On the earth or on rocks, mostly among mosses..... *Peltigera.\**
- e. Th. cartilaginous-membranaceous, with rounded lobes, not veiny below, and with short rhizoids. Ap. as in the last but reniform and borne on the under surface of the lobes. Sp. fusiform-ellipsoid, 4-locular. Mostly on rocks and trees..... *Nephroma.\**
- 15. a. Th. not gelatinous when moist..... 16
- b. Th. gelatinous when moist ..... 20
- 16. a. Th. pale green or straw-colored above, blackening below..... 17
- b. Th. grayish or whitish ash-colored above, blackening below..... 18
- c. Th. grayish or whitish ash-colored above, fawn-color or whitish below..... 19
- d. Th. olivaceous brown or bronze-colored above, blackening below and with black rhizoids toward the centre, membranaceous, closely appressed. Dk. chestnut; th. ex. crenulate. Sp. simple. ellipsoid, colorless. On trees and rocks..... *Parmelia olivacea.*
- e. Th. pale yellow to bright orange above, white below, rather loosely appressed. Dk. orange; th. ex. entire. Sp. polar-bilocular, ellipsoid, colorless. On trees and rocks near large bodies of water.  
*Theloschistes parietinus.*
- 17. a. Th. cartilaginous-membranaceous, the lobes mostly rather narrow,



- sub-linear and much divided, smooth, not wrinkled. Dk. chestnut; th. ex. entire. On rocks.....*Parmelia conspersa*.
- b. Th. cartilaginous; the lobes mostly broad and rounded, with numerous distinct wrinkles on the older portions. (Not commonly fertile; dk. as in the last, th. ex. crenulate or sorediiferous). On trees and rocks.....*Parmelia caperata*.
18. a. Th. commonly reaching a diameter of 10-20 cm. or more, rather loosely adherent; lobes flat or concave, repand, rather narrow, becoming reticulately rimose above, densely black fibrillose below, the rhizoids reaching the margin. Dk. chestnut; th. ex. rather thick, sub-crenulate. Sp. simple, ellipsoid, colorless. On rocks.  
*Parmelia saxatilis*.
- b. Th. smaller, closely adnate; lobes flat, smooth, rounded and crenate or more deeply divided, rhizoids black and extending to the margin, but not prominent. Dk. and sp. much as in the last; th. ex. mostly thin and entire. On trees and rocks.....*Parmelia tiliacea*.
19. a. Th. commonly reaching a diameter of 10-20 cm. or more; lobes rounded, flat or concave, somewhat ascendant; becoming reticulate, rugose and often with soredia or isidia. Dk. chestnut; th. ex. crenulate. Sp. simple, ellipsoid, colorless. On rocks and trees.  
*Parmelia Borreri*.
- b. Th. seldom more than 5 cm. broad, lobes sub-linear, convex, often overlapping and appressed, smooth, without soredia. Dk. brownish-black or gray-pruinose when young; th. ex. mostly entire. Sp. bilocular, ellipsoid, brown. On trees, dead wood and rocks.  
*Physcia stellaris*.
20. a. Th. mostly dark olive green, without distinct cortical layer. Ap. scutellæform .....*Collema*\*
- b. Th. mostly lead-colored, with a distinct cortical layer. Ap. scutellæform, zeorine or biatorine.....*Leptogium*.\*
21. a. Ap. scutellæform or zeorine..... 22
- b. Ap. cephaloid, stalked; dk. rose-pink or flesh-colored; proper exciple (which constitutes the stalk) pinkish-white. Sp. simple, fusiform-oblong, colorless. Th. granular, ashy-gray. On the earth.  
*Bæomyces roseus*.
- c. Ap. lirellæform, branched, innate, black, with or without a th. ex. Sp. ellipsoid fusiform, pluri-ocular, colorless. Th. inconspicuous, forming a very thin, smooth, whitish incrustation on bark.  
*Graphis scripta*.
- d. Ap. crateriform, sessile, with a black dk. and proper ex., surrounded by an accessory thalline one. Sp. ellipsoid-oblong, bilocular, dark colored. Th. greenish-yellow, granular. On dead wood.  
*Acolium tigillare*
22. a. Th. drabish-white, becoming rimose or wrinkled. Dk 1-3 mm. broad flesh color or pinkish pruinose; th. ex. thick, entire. Sp. simple, ellipsoid, colorless  $\frac{50-90}{22-40}$  mic. On bark.....*Lecanora pallascens*.

- b. Th. much as in the last but often granular. Dk. about .5-1. mm. broad, redish to dark brown; th. ex. rather thin, entire or crenulate. Sp. as in the last but  $\frac{9-20}{7-11}$  mic. On bark, dead wood and rocks.

*Lecanora subfusca.*

- c. Th. areolate verruculose, pale-greenish, yellowish or whitish. Dk. about .2-.8 mm. broad, pale yellowish, buff or ochraceous-brown; th. rather thin, entire or crenulate. Sp. as in the last but  $\frac{9-16}{4-7}$  mic. On bark, dead wood and rocks ..... *Lecanora varia.*

THE END.

Cambridge, Mass.

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### SOME COMMON ERRORS.

EDWARD B. CHAMBERLAIN.

Several times during the past year I have noticed that some of the members of the Sullivant Moss Chapter were abusing the assistance given them by professional bryologists. Usually, the fault was in the misuse of the words "determined by," when sending out specimens offered through the BRYOLOGIST.

I have recently received from Chapter Members mosses which were labelled as named by this or that specialist, when the date of the collection and the often undried condition of the material made it impossible for the specialist to have seen either the specimen or even a duplicate of it. Further inquiry showed the facts to be somewhat as follows: A, collected a moss, and sent it to B, who determined it. Then A, wishing to offer it to the Chapter, and not having on hand a sufficient quantity, went to the spot where he previously found the moss, or where he now thinks he found it, secured more material which looked like the same thing, and distributed this last, labelling it "detr. B," *although B had actually seen none of the second collection.* This second collection may have been the same as the first, but it very probably was not. Under any circumstances it was very unjust and discourteous to the person naming the original collection to make him sponsor for the second. It is really a forgery of his determination.

To avoid such errors the following rule should be adhered to in the use of the words "determined by" or "verified by." Never under any circumstances mark a specimen as determined by another person than the collector unless that person has actually seen either the specimen itself or a true duplicate of it. In the latter case it is very much better to use the words "duplicate determined by." In such a case as that outlined above, the specimens must be marked as determined by the collector, for nobody else had anything to with them.

In this connection it may be well to explain what a duplicate is. By duplicates in mosses are meant, strictly speaking, specimens of the same species, collected in the same locality, upon the same substratum, by the same person and on the same date. The strictness with which this is to be interpreted depends to some extent upon the species of moss in question. In the case of such genera as *Ulota* or *Grimmia*, or of certain of the

## ERRATA

- Page 1, line 13 from bottom, for *Sullivantae* read *Sullivantiae*.
- Page 2, line 18 from bottom, for Europeae read Europaea.
- Page 3, line 10 from bottom, for Europea read Europaea.
- Page 6, line 15, for ONITHOPODIOIDES read ORNITHOPODIOIDES.
- Page 7, line 21, for INTEGROFOLIA read INTEGRIFOLIA.
- Page 25, line 12, for iodine read iodide
- Page 43, line 7 from bottom, for Sphaerocaphalus read Sphaerocephalus.
- Page 51, line 22, for saxitalis read saxatilis.
- Page 53, line 15, for *endiviaefolia* read *endiviaefolia*.
- Page 53, line 18, for *Lyellii* read *Lyellii*.
- Page 54, line 11, for *leavis* read *laevis*.
- Page 57, line 3 of Explanation of Plate V, for *asplenoides* read *asplenioides*.
- Page 71, line 2, for **M. C.** read **C. M.**
- Page 80, line 10, for **n. sp.** read **nom. nov.**
- Page 94, line 8 from bottom, for *cylandrothecium* read *cladorrhizans*.
- Page 102, line 8 of key, insert b before Ap. scarlet or orange.
- Page 102, last line, for *Everina* read *Evernia*.
- Page 103, line 3, for *Everina* read *Evernia*.
- Page 103, line 15, for fibrilose read fibrillose.
- Page 104, line 18, for filbrillose read fibrillose.
- Page 106, line 5, for verraculose read verruculose.
- Page 109, line 16 from bottom, for thallus read talus.
- Page 112, line 12, for Floerk's read Floerke's.